Amendments to the Specification

Please replace paragraph 0005 with the following rewritten paragraph:

[0005] A number of operating parameters and plating cell attributes influence the uniformity of copper deposition onto a workpiece. This invention concentrates on the influence of electrochemical cell configuration on the uniformity of copper deposition on the board surface, in particular, the influence of cell configuration on solution hydrodynamics, and the ability to generate uniform flow of electrolyte across the surface of the board during the plating operation. Fig. 1 shows a plating cell (100) which contains a workpiece (102). Although only one workpiece is shown in this and subsequent drawings, one skilled in the art understands that in actual practice a plurality of workpieces may be contained in the plating cell. For ease of description, the term workpiece is understood to encompass one or more workpieces. The workpiece (102) in prior art Figs. ~~1-3~~2-3, 5, and 7-9 is presented as a generally flat panel having at least one generally flat surface for electroplating. Arrows (104) indicate the desired uniform flow of electrolyte across the entire surface of the workpiece (102).

Please replace paragraph 0009 with the following rewritten paragraph:

[0009] However, as shown in Fig. 4, the use of eductors (116) can lead to a variation in solution flow velocity across the workpiece (102) (Chin, D-T. and C-H. Tsang, 1978), (Hsueh, K-L. and D-T. Chin, 1986a), (Hsueh, K-L. and D-T. Chin, 1986b). Fluid flows from the eductor (116) to the impingement point (118) on the surface of the workpiece (102). The fluid flow profile (120) and jet centerline (122) are shown. The flow from the eductor (116) is directly perpendicular to the surface of the workpiece (102). In region I, referred to as the potential core region, the flow from the eductor (116) mixes with the surrounding electrolyte. In region II, referred to as the established flow region, the velocity profile (124) is well established, and the solution flow velocity decreases as a function of distance from the eductor (116). In region III, referred to as the stagnation region, the velocity decreases to almost zero, and the boundary layer

thickness is relatively independent of the radial position near the impingement point (118) and centerline (122). In region IV, referred to as the wall jet region, the radial velocity decreases and the boundary layer thickness increases, as a function of distance radially outward from the impingement point (118). These variations in solution flow ~~velocity~~ velocity, termed the glancing effect, within regions III and IV contribute to variations in the thickness of copper deposited on the surface of the workpiece (102).

Please replace paragraph 0023 with the following rewritten paragraph:

[0023] Fig. 1 is a schematic illustration of the cross-section of a ~~prior art~~ plating cell containing a workpiece, with arrows showing the desired uniform solution flow velocity across the surface of the workpiece.

Please replace paragraph 0036 with the following rewritten paragraph:

[0036] Fig. 14 is a set of graphs showing the effects of changing the attributes in the plating cell on the uniformity of metal deposition on a flat stainless steel panel. The smaller the ~~covariance~~ coefficient of variation (CoV), the more uniform the metal deposition.

Please replace paragraph 0044 with the following rewritten paragraph:

[0044] Electrolyte flowing out of the eductors (116) is directed vertically past the workpiece (102) by a solution flow velocity dampening member (~~126~~136), whereby the variations in electrolyte solution are suppressed. In one embodiment of the invention, the solution flow velocity dampener is a series of shaped guides (136) located below the workpiece (102). The use of the shaped guides (136) directs the solution flow parallel the surface of the workpiece thereby dampening the variations in solution flow velocity described above in the prior art, reducing the glancing effect, and resulting in more uniform flow across the surface of the workpiece (102). The solution flow velocity dampening members that are useful herein may have a variety of shapes. For example, curved panel sections with various radii of curvature

relative to the surface of the workpiece and flat ramps with various incline angles relative to the surface of the workpiece. As taught herein, the optimum configuration for the shaped dampening member is easily determined without undue experimentation by those of ordinary skill in the art. The radius of curvature utilized for one embodiment was 8.25 inches. A useful range may be about 6 to 12 inches for a plating cell in which the distance between the bottom of the shaped guide and the workpiece is approximately 10.5 inches.